

CLAIMS

What is claimed is:

- 5 1. A lamp, comprising:
- a housing having a pair of openings on opposite sides; and
- a plurality of light-emitting diodes (LEDs) arranged to form two different LED arrays,
- wherein each of the LED arrays corresponds to a different one of the openings of the
- housing, and wherein at least a portion of each of the LED arrays is exposed through
- 10 the corresponding opening.

2. The lamp as recited in claim 1, wherein the housing comprises a hollow cylinder.

3. The lamp as recited in claim 1, further comprising a pair of printed circuit boards (PCBs), wherein the light-emitting diodes (LEDs) of each of the LED arrays are mounted to a different one
5 of the pair of PCBs.

4. The lamp as recited in claim 1, further comprising a base connected to a side surface of the housing and adapted for connecting to a lamp holder or socket.

10 5. The lamp as recited in claim 4, wherein the base is a bayonet base adapted for connecting to a bayonet-type lamp holder or socket.

6. The lamp as recited in claim 4, wherein the base comprises a shell and a pair of contacts that form electrical contacts between the lamp and the lamp holder or socket.

15 7. The lamp as recited in claim 4, wherein the housing comprises a plurality of holes in the side surface opposite the base, and wherein at least one light-emitting diode (LED) of each of the LED arrays is exposed through one of the holes.

20 8. The lamp as recited in claim 7, wherein the at least one LED is generally orthogonal to at least one of the LED arrays.

9. The lamp as recited in claim 4, wherein the housing is formed from a thermoplastic polyester resin material.

10. The lamp as recited in claim 7, wherein the lamp is configured to emit light from the pair of
5 openings of the housing and from the holes in the side surface of the housing opposite the base.

11. The lamp as recited in claim 1, wherein all of the light-emitting diodes (LEDs) of the lamp emit the same color of visible light.

10 12. The lamp as recited in claim 1, wherein all of the light-emitting diodes (LEDs) of the lamp emit either red, yellow, or blue light.

13. The lamp as recited in claim 1, further comprising an electrical circuit coupled to the light-emitting diodes (LEDs) of one of the LED arrays and configured to properly illuminate the LEDs
15 independent of the polarity of an input direct current voltage.

14. The lamp as recited in claim 13, wherein the electrical circuit comprises a resistor coupled to a diode array.

20 15. The lamp as recited in claim 14, wherein diode array comprises a bridge rectifier device mounted to a printed circuit board.

16. A lamp, comprising:

a hollow, cylindrical housing having a first opening and a second opening on opposite sides;

a first printed circuit board (PCB) positioned adjacent to the first opening and having a first plurality of light-emitting diodes (LEDs) mounted thereon, wherein at least a portion

5 of the first plurality of LEDs is exposed through the first opening; and

a second PCB positioned adjacent to the second opening and having a second plurality of LEDs mounted thereon, wherein at least a portion of the second plurality of LEDs is exposed through the second opening.

17. The lamp as recited in claim 16, further comprising a base connected to a side surface of the housing and adapted for connecting to a lamp holder or socket.

18. The lamp as recited in claim 17, wherein the housing comprises a plurality of holes in the side
5 surface opposite the base, and wherein at least one light-emitting diode (LED) of the first and second pluralities of LEDs is exposed through one of the holes.

19. The lamp as recited in claim 18, wherein the lamp is configured to emit light from the first and second openings of the housing and from the holes in the side surface of the housing opposite the
10 base.

20. The lamp as recited in claim 16, further comprising an electrical circuit coupled to the first plurality of light-emitting diodes (LEDs) and configured to properly illuminate the first plurality of LEDs independent of the polarity of an input direct current voltage.

15